Wood Duck Nest Boxes

Landowners For Wildlife

One of the most successful wildlife conservation stories of the last century is the recovery of the wood duck from its extremely low population levels of the early 1900's. An obligate cavity nester (they must nest in some type of cavity), the wood duck's scarcity resulted from a combination of unregulated harvest and forested wetland losses. Their recovery, present day abundance, and distribution were aided in part by a period of restricted harvest and the large scale use of artificial nest cavities placed in wetland areas where natural cavities had become scarce or absent. Now very abundant throughout Louisiana, "woodies" are the 4th or 5th most abundant bird in the bag of Louisiana duck hunters.

The first artificial nest cavities were developed and used in Illinois in the late 1930's. Their effectiveness lead to widespread use and promotion by game agencies and private conservation organizations. The boxes are easy to build, inexpensive, and most importantly, highly effective. Most boxes will be used the first year if they're located in suitable habitat and accessible to wood ducks before the breeding season begins. Breeding hens regularly return each spring to the same region from which they hatched (sometimes the same wetland or even the same cavity). Therefore, box usage will increase once returning hens produce successful broods of ducklings. Nest boxes are also regularly used by a variety of other wildlife (see below).

Many private landowners, especially those interested in wildlife management, build their own nest boxes and erect them on their property. With a basic knowledge of wood duck biology and life history, a landowner can easily manage a successful nest box program that supplements the local population of wood ducks.

Technical Assistance

LDWF Private Lands Biologists are available to assess your property and evaluate the potential benefits of placing wood duck boxes. Agreements may also be made to have department staff erect and maintain an appropriate number of nest boxes on your property free of charge.

LOUISIANA Landowners for Wildlife Private Lands Program WILDLIFE & FISHERIES

Potential Users of Nest Boxes

Wood Duck
Hooded Merganser
Black Bellied Whistling Duck
Screech Owl
Flicker
Prothonotary Warbler
Carolina Wren
Great Crested Flycatcher
Eastern Bluebird
Starlings
Squirrels
Raccoons
Opossum
Insects: Bees,Wasps, Mud daubers

Nesting Habitat

Wood ducks nest in every parish of Louisiana, but breeding wood duck densities are greatest in the Mississippi and Red River Alluvial Plains. These two geographic areas contain the largest acreage of forested wetlands within the state. Productive wood duck breeding habitat includes secluded swamps, oxbows, lakes, and bayous, but wood ducks will utilize nest cavities located in and around almost any water body. Marsh ponds, catfish & crawfish ponds, rice fields, and even borrow pits and urban recreational ponds will attract nesting wood ducks.

Most nesting begins in March or April, although some experienced hens will begin nesting in early February. Hens may start nests in several different cavities before settling on a preferred site. They generally lay one egg per day until the last of a 10-12 egg (average) clutch is laid. The nest is lined and insulated with feathers that the hen plucks from her own breast. Incubation begins after the last egg is laid and continues for 29-31 days. All the ducklings in a nest hatch within hours of each other. After their downy feathers dry and they gain strength and muscular control, they leap from the nest to the water or ground below to the calls of the hen.

Brood Habitat

Although wood ducks will attempt to nest almost anywhere a cavity can be found, more hatched ducklings does not always translate into more ducks in the population. The availability of brood habitat is the most important consideration when deciding where to place nest boxes. After hatching, a duckling will not be able to fly for 50 days. During this time they must feed, rest, and most importantly, avoid predators. If hatched in a wetland with poor brood habitat conditions, a hen will often lead her brood overland in search of suitable habitat. This overland trek is a very dangerous endeavor for flightless ducklings.

It is essential that nest boxes be placed in the immediate vicinity of or directly within high quality wetlands. Backyard fishing ponds, city park ponds, and other water bodies with open water and clean shorelines do not contribute significantly to overall wood duck productivity. The best brood rearing habitat contains an abundance of emergent aquatic vegetation such as cattails, pond lilies, lotus, sedges and rushes, and woody overhead cover such as buttonbush and black willow.

Examples of good nesting and brood rearing habitat

Nests may be unsuccessful due to destruction and/or abandonment.

Predators

Nest Predators

The top predators of wood duck nests in Louisiana are rat snakes and raccoons. Depredation by these species can be minimized by proper nest box placement and correct use of a predator guard. Boxes should never be affixed directly to a tree trunk, and they should be located overwater in an area devoid of overhanging tree limbs or vines. Proper placement of predator guards will ensure that swimming predators cannot reach the nest box from below.

Duckling Predators

Newly hatched ducklings have many predators and a mortality rate of greater than 70%. In the nest box, fire ants, raccoons, and rat snakes can destroy both eggs and freshly hatched ducklings. Once ducklings can fly at 50 days old, their survival rate increases greatly. Quality brood habitat provides needed protection from predators.

Nest Predators	**Duckling Predators**	
Raccoon	Raccoon	Mink
Rat Snake	Coyote	Bobcat
Squirrel	Alligator	Snakes
Fire Ants	Turtles	Fish
Flicker	Herons	Owls
Starling	Raptors	
Woodpecker		

Dump Nesting – Nest Parasitism is the use of a single nest by more than one hen. Although wood duck hens are capable of incubating and hatching another bird's eggs, dump nesting often results in abandonment of the nest and a subsequent loss in productivity. The biggest contributors to dump nesting are other wood ducks, hooded mergansers, and to a lesser extent, black bellied whistling ducks.

The average clutch size for a wood duck nest is 12 eggs, but clutch sizes can easily exceed 14 eggs per box. Any box with 15 or more eggs is generally thought to be a dump nest. Dump nests may be used by several hens, and dump nests often contain in excess of 30 eggs.

Dump nesting is largely attributed to a lack of sufficient nest cavities or an artificially high density of nest boxes. Individual nest boxes should always be hidden from each other and/or arranged in secluded locations. Multiple nest box "apartments" produce severe examples of dump nesting. They also cause nest abandonment due to fights between nesting hens.

-Wood duck physiology allows hens to attempt a new nest if preceding attempts have failed. Second and third nest attempts, however, result in smaller clutches.

- Wood ducks in the south may successfully hatch two nests in the same breeding season.

Contact a local LDWF office for more information www.wlf.la.gov

Constructing Your Own Nest Box

One of many effective plans for building your own nest box is presented here. Inside dimensions of a box typically range from 9“ to 12” square with a wide variety of access door designs. Rough-cut cypress or cedar is the most commonly used wood. For this plan, the entire box can be created from an 8 ft. X 11 in. X 1 in. board.

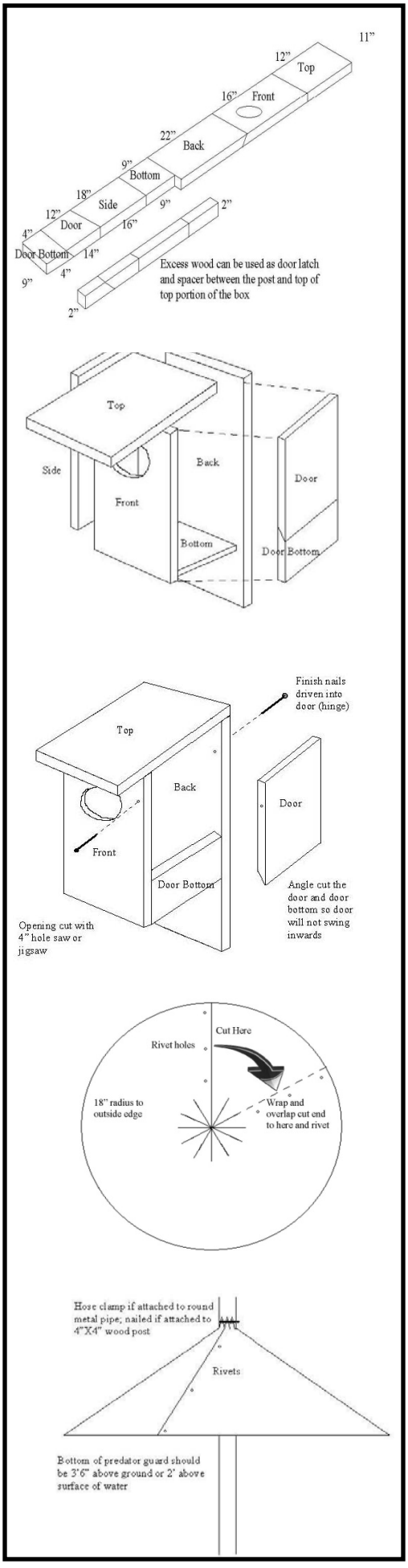
Cut out and nail pieces as shown. A 4”X3” oval or 4” circular hole should be cut into the front of the box near the top, making sure the overhanging roof will not impede entrance. Rough cut wood is necessary for ducklings to use their sharp claws to climb to the opening and jump out. If using smooth wood, a section of hardware cloth or window screen stapled to the front interior of the box just below the entrance hole will provide ducklings a climbing substrate. Two finishing nails driven through the front and back of the box, and into the left and right sides of the door will serve as a hinge for cleaning access.

At least 3” of wood shavings (not saw dust) should be placed in the box bottom for hens to use in constructing a nest. These shavings provide insulation and help retain heat once the hen begins incubation.

Boxes should never be affixed directly to a tree. Both the predator guard and the box should be placed on treated 4”X4” wood posts or 2” metal pipe, preferably mounted above water to eliminate fire ant predation. Attach boxes to wooden posts with any variety of hardware. U-bolts can be used to attach boxes to pipes. Overhanging branches and climbing vegetation should be cleared from the vicinity of the nest box.

Predator guards can be constructed from 26 gauge galvanized sheet metal, riveted or bolted together to form a cone. Guards can be attached to the pole directly under the nest box with metal hose clamps or nails. Attach the guard first before mounting the box. **Predator guards will not prevent fire ant predation.**

Finally, annual maintenance of nest boxes is a must. Old nest material, eggshells, insect nests, and un-hatched eggs must be discarded. New wood shavings should be added each December or January prior to the nesting season. A second addition of new shavings in April-May will help produce a second nest.



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